

ABEL2



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Education's Impact on Girls: Five Generations of an Indian Family

by Joyce M. Wolf and Mihira Karra

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I. INTRODUCTION

The current flurry of interest in educating girls has been sparked not by the issue of equity, that it is only fair and right that females receive as much education as males, but by research results suggesting that girls' education might be what Lawrence Summers called "the most influential investment" (1992). Throughout the late 1980s, a growing number of studies began to report that the amount of education that girls in countries all over the world had received was highly correlated with declines in fertility, decreases in child mortality, and increases in children's education (see research findings discussed in reviews such as Abraham and Abraham, 1988; Blumberg, 1989; Floro and Wolf, 1990; King, 1990; King and Hill, 1993). Interest in educating girls has now reached a point where the governments in poor nations, that desperately want to reduce their population growth and improve the survival rate of their children, and the donor agencies, attempting to support those nations, are considering a range of policy changes and/or programs that target girls' education.

However, before these policies and programs are designed it may be important to explore what is going on in the "black box" between increases in girls' education and fertility declines, child health improvements, and gains in children's education. Knowing why and how education has these effects, as well as what kind of education, could make a real difference in selecting an approach that will achieve the desired impact. For example, if it is the social experience of school, which strengthens the confidence and decision-making power of the girl, that leads to women doing things that, in turn, lead to reduced fertility and improved child health and education, then will enhancing the quality of the schooling she receives make a difference? Is literacy important? What are the factors, such as working outside the home, that might augment or diminish the impact of a girl's education? This study is designed to contribute to our understanding of the nature of the relationship between girls' education and fertility, child health, and child education, what changes when a girl is educated, how those changes are played out to influence social changes, and what other factors influence the education girls receive and the impact that education has on their lives.

In pursuit of information about these relationships we conducted in-depth interviews with individuals representing five generations of a complex family in India, following the family into whatever city, or town, or village that it took us. We asked questions about family structure, marriage, education, fertility, contraception, child birth, child care, decision-making, medical knowledge, and use of medical facilities. The family itself is neither "typical" of Indian families nor representative of those who most need assistance; but it does document a process of change from zero years of education to advanced degrees among its members, a pattern of change which it shares with many of the families of India and with many other families in other parts of the world. The 178 family members about whom we have gathered information prove an opportunity to investigate the complexity of factors that played a role in that process, how those factors interacted, and how the people involved thought about the changes as they occured. Why education is or is not invested in, how it changes things for individuals and for the horizontal and vertical unit of the family, and how those changes interact over time are patterns that can be discovered in one family but generalized to other families in other contexts. Actual events are always different, but the patterns of how events are connected to one another and influence each other are structural relationships that reappear in many contexts.

II. CONTEXT: A SYSTEM OF STRATEGIES INVOLVING EDUCATION

A: Two Brothers and Their Land

Two brothers, born in the 1890s, attended school for two and four years respectively. This was more education than either of their parents received, neither of whom had any formal education, or than their two younger sisters received, who were married young and never attended school. Nor did their sisters inherit any part of the family land, as women during that period in that state could not inherit property that had been inherited by their fathers, i.e. only property that had been purchased could be willed to daughters. The two brothers inherited the farm that supported the family from their father; as the brothers lived jointly on the profits from the land, there was little reason to divide the land. Both brothers married girls with no education and began raising their families together. The elder brother's wife died in child birth after the birth of two daughters; the younger brother, after the birth of one son, also died. The surviving brother married again, to a girl eleven years old, and had another eight children, including five sons.

The elder brother's second wife is now 83 years old; she has never been, unaccompanied, outside of her home. She reports that she had wanted to continue her education beyond the eight years that she had had, but there had been no school for girls in their small town beyond the eighth grade. In addition, her mother would not allow her to have more education before she left to join her husband's household at fifteen because her husband had only had two years of education. Her mother believed that the parents-in-law would be annoyed if their new daughter-in-law continued to study. This woman is, in fact, one of only eleven women, out of the 101 women interviewed, to have more years of education than her husband.

The five daughters of the elder brother were married young: four at ten years of age and one at eleven years; one had no education, the other four had, respectively, four, five, six, and eight years of schooling. As the sons grew older the question of land division had to be faced. Because the younger brother had died with only one son, his half of the land would be inherited by his son. The elder brother realized that dividing his half into five parcels for his sons would not produce large enough landholdings to support them and their families. The strategy that he adopted was to sell his half of the land and use the proceeds to educate his five sons: Three of those sons now have PhDs and two have engineering masters degrees. Unlike his cousins, the son of the younger brother, who inherited his father's half of the land, was pressured by the family to stop his education and take over management of the farm by his uncles. He finally convinced them to let him complete a B.A. in agriculture. Today he still lives in the family home, where he raised his children, and is still supported by the profits from his half of the land, a farm of approximately five acres.

¹Their father was, however, a well-educated man in the traditional school of Vedic learning.

This is a Brahmin family and we are accustomed to thinking of Brahmins as the most prestigious and powerful members of their culture. In the West, prestige and power are almost always linked to wealth; this is not necessarily the case in India. Traditionally a Brahmin man made his living by conducting the rituals necessary for every part of life and being paid by those who commissioned those rituals according to their means. Land grants were, however, frequently given to Brahmins by persons with great wealth as a reward for what was considered to have been an especially effective ritual or as a means for keeping a Brahmin in the community and, therefore, available to conduct the necessary rituals. Once they became landlords, however, these Brahmins were often, if the land was sufficient, freed of the dependence upon ritual practice to support themselves and their families. But the land, in the first place, came from their control over the most valued knowledge in the society.

The choice of education as a strategy to maintain a Brahmin family's prestige, power, and income in a changing society, when the land no longer could, is a logical outgrowth of the basis for originally acquiring the land. In Nepal during the 1980s, priest caste families were in the process of substituting the amount of Western-style education their sons had achieved for the previously- used number and type of rituals they could perform when they petitioned a potential wife's family during marriage negotiations. The knowledge of value in India shifted in the twentieth century from Hindu ritual knowledge to Western-style educational knowledge². Brahmin families, such as this one, were familiar with the power of knowledge and simply shifted, with the culture, to controlling a different type of knowledge.

In the story above, both the younger brother and the wife of the older brother died in their twenties. There were, in fact, only two brothers and two sisters because five of the total of nine children born to their parents had died before they were five years old. Yet all of the children of these four siblings who survived the first years after birth are now still alive. The changes in health and the resultant changes in the survival rates of adults and children which occurred in the first half of the twentieth century in India have had a tremendous impact on strategies for economic survival. In a agriculturally-based society, too many surviving children can fragment the land beyond its ability to support families. The pressure to devise a different method of support can be a pressure for education in a society where education does lead to jobs and security, as it has in India. However, the increases in the number of surviving children also has had an impact on the job market over the last 30 years, leading to increasingly fewer jobs and, consequently, increasingly higher requirements for those jobs.

It is in this context that education became both cause and effect in its relationship to fertility. The five well-educated sons of the elder brother each had two children; their cousin, who had less education and remained a landlord, had four children; their five little-educated sisters, in spite of one being widowed at a young age, had a average of four children each. Almost all of those interviewed from the generation of these five sons and five daughters on, gave the inability to fully educate more than two children to the standard that they now considered necessary as the reason for selecting two as the ideal number of

²Britain played a role in the promotion of Western-style education at the expense of previously-existing traditional education in India. In addition, the use of formal, Western educational credentials for civil service positions under British rule and since independence has increased the command of formal education.

children³. Once such a high standard of male education had been set in some families within the larger family unit being interviewed, generally as an attempt to maintain the life style within which they had been raised, then the number of children immediately dropped radically, usually to two children. Throughout India for the last thirty years, intensive population control programs have tried to sell the idea of two children, often with little success. While it might be bad for the total country to have so many children, as long as jobs exist and the lower levels of education are free, it generally benefits an individual family to have more children (Mamdani, 1972). However, once the goal for each child is an expensive college and beyond education, then more than two children do not benefit the family.

B: The Educated Woman

During the same period of time that the two brothers were marrying and beginning their families, another Brahmin family married off their daughter when she was 14 years old and sent her to her husband's household after she had completed ten years of education. Once in her husband's home, she had one child, a daughter, before her husband died. In Indian culture during that time period a woman with neither a husband nor a son had no prestige within the family she had married into and frequently ended up working as a servant to the family. The father of this woman was concerned about the fate of his daughter and asked to have her returned to his household. However, once returned to her parental home, there was still no role for her. According to Hindu tradition, she could not remarry and she could not have any more children, the traditional role for women.

Her father, who was a professor of engineering, was an exceptionally well-educated man for his time, being of the same generation and class as the parents of the "Two Brothers," neither of whom had had any formal education. The reason that the family gives for his degree of education is that he had inherited no land and needed an education in order to support himself. In other words, the relationship between land and education that began in the generation of the two brothers in the previously described family had begun two generations earlier in this family. Each of the professor's four sons received engineering degrees; each of his four daughters initially received ten years of education, which represents the completion of secondary school. His belief in education was so great that he even had the eight year old bride of one of his sons brought into his household at the time of her marriage, although the custom is for girls to remain in their own homes until they reach puberty, in order to educate her also through the tenth grade.

When his widowed daughter returned to the household, her father decided to educate her further in order for her to be able to support herself, a radical idea at that time but grounded in his own experience of education as a route to financial security, his role as an educator, and his liberal philosophy developed during the independence movement. At that time the only professional

³The cousin who remained a landlord felt that, due to the land he had inherited, he would be able to educate his four children.

fields open to women were teaching and nursing, while his daughter's interests and talents lay in engineering. Her father fought the state government, using his power as a professor, to have her admitted to engineering school. Two of her younger brothers were still obtaining their engineering degrees and their ability to accompany her helped make the process possible. Her education, with no possible marriage to interrupt it, continued until she became the first female engineer in India.

This "Educated Woman" was most unusual for her time and context. The initial amount of education that she and her sisters received, ten years each, was even unusual, as can be seen by contrasting it with the complete lack of education received by the sisters of the "Two Brothers" in the first story, who were of the same generation and class. Part of the reason that these four girls had been able to attend school for so long was due to the fact that their father was not a landlord, but a professor, which meant that they lived in a city where girls' schools that offered classes up through the tenth grade existed. While the amount and type of education the widowed daughter received was unusual, the most extraordinary aspect of her story may be the fact that she was not only educated as an engineer, but that she also worked as one for 35 years. At a time when most women of her generation and class rarely left their homes, she left her daughter with her parents and worked in other cities, where she lived either with relatives or in women's hostels. Forty-seven percent of the women who were interviewed, even with their relatively substantial educations, had never worked outside the home.

The anthropological literature on gender has frequently pointed out the role that an "inside-outside" dichotomy has played in defining female and male roles. Women, due to their need to breastfeed children, are generally required to remain close to the home; men, without this responsibility, have traditionally taken on the outside-the-household, community roles such as business and politics, from which they have derived a disproportionate share of power, which tends to be translated back into the household unit. The traditional Indian system of values prescribes females' role as those that are home-based. The 83 year old wife of one of the brothers in "Two Brothers and Their Land" had never left her home unaccompanied, and then only to visit a relative or neighbor. Most of the women who were interviewed from the older generations of the family felt that one of the major impacts their education had played on their lives was that it enabled them to "go outside," by which they meant to go to the bank, the post office, the local store or to visit people unaccompanied.

Until very recently, it has primarily been Indian men who used their education to secure jobs. 94 percent of those interviewed listed the need to "earn a living" as the major reason for educating sons; only 37 percent gave earning a living as a reason for educating daughters. Women all over India work outside the household, but, traditionally, that has only been when their economic situation has been so desperate that their earnings were necessary and education had little to do with the jobs they preformed. And it was only Brahmin men who performed the rituals that supported their families. There has, therefore, been no tradition in which knowledge held by females financially benefitted the family unit.

The impact of the educational level of the "Educated Woman" and her three sisters can be observed over the following generations. The female engineer's daughter earned a masters degree and her granddaughter has a PhD. The female descendants of this woman and her three sisters over the next three generations have an average of 15.4 years of education, as compared to an average of 10.1 years

for the female descendants of the sisters of the "Two Brothers." In addition, the sisters of the "Two Brothers" averaged six children each, while these four sisters averaged 3.2 children each.

C: The Doctor

In the generation of the grandchildren of the "Two Brothers" and the 'Educated Women," a young man from a small village began his educational career in a school with only one teacher for almost 100 students. He was an only child and his parents were unusually protective of his well-being; consequently, when they moved to town while he was in the third grade, his father, who was a teacher, tutored him at home rather than letting him face the dangers of traffic in the city. He did well in secondary and intermediate school and was tutored for two months before taking his entrance exams for medical college, as he had set his heart on becoming a doctor. He was not immediately admitted to medical school and learned that, although he had scored 70 percent on the entrance test, another student, who had only scored 59 percent, was being admitted because he was making a RS12,000 "contribution" to the medical college.

Desperately he wrote to his father, saying that he would kill himself unless he could get the money to make a "contribution" that would get him into medical school.

His father, who made only RS300-400 per month as a teacher, was even more desperate: he sat in front of the family goddess for days before an inspiration came to him. He went back to the small village they had come from and let it be known that he was looking for the highest dowry for his son, the future doctor. A close friend, who trusted the young man's father, gave him RS10,000 in dowry for his seven year old daughter. The marriage was completed, the money went to the medical college, the son was admitted, and the girl came to live with her husband when she was 15 years old. Today that son is a doctor in a medium-sized town. He and his wife have three sons, who are all attending expensive private. English-medium schools. The doctor's wife completed ten years of education; her husband makes all decisions about resource allocation and the education of their children. They will have no more children as the wife has had a tubal ligation; his family considered it too risky for him to be sterilized as he is an only son.

Interestingly, the village where the father was able to obtain the dowry necessary for his son's medical career had, prior to the father's generation, practiced a marriage system in which money was paid to the wife's family rather than to the husband's. The Hindu tradition of dowry was grounded in supplying moveable wealth, often gold jewelry, to daughters because they did not inherit or control land or work outside of the home. It was, in fact, considered wrong for a man to take his wife's dowry, as this was what her family gave to her for her protection. If a family lacked enough wealth for gold or other valuables, the dowry often consisted of simple household goods. The practice of "price for bride" had developed as a means for men of wealth, whose wives had died, to secure young brides, who, without

⁴In has become common in recents years for advanced training institutions to accept 50% of their scudents on the basis of merit and 50% on the basis of paying money to the institution.

this payment to their families, would have been unwilling to marry a man who would make them a widow so soon. This practice developed during a time when maternal mortality was high and the female to male ratio was low; it was rejected and a return to a dowry system was reestablished as communities began to find no brides available for their young sons, and as thee practice faced the ridicule led by a famous playwrite.

Today, increasingly, the rationalization for dowry that is given is that the family of the husband needs to recoup the money that they have spent on their son's education. Thus, there is really nothing unusual about the story of the doctor other than the fact that the dowry that paid for his education was paid before the education occurred. In fact, as dowries increase with education of the husband, the doctor's father's friend in his home village could be seen as getting a bargain, as the dowry for his daughter was far less than he would have had to pay once his friend's son had completed medical school. However, the impact of dowry is not decreasing; if anything, it may be increasing in the pressure it places upon families and young women.

Although there are currently many conflicting trends, due to the cultural complexity of India that makes nay generalization difficult, the role dowry plays in women's education cannot be overemphasized. The stress placed on families to come up with dowry for their daughters has led to a tendency to marry off oldest girl children as soon as possible to lessen the pressure on the family. This is translated into less education for those girls, as age of marriage for females and amount of education is highly correlated among the women interviewed. In addition, the amount of education received by all of the children in a family is negatively correlated with the percent of female children in the family. In a family of eight children in the youngest generation included in the sample there are six daughters and two sons; the first four daughters received no education, the two sons received 12 years of education each and the last two daughters received, respectively, two and four years.

Among the youngest and most educated women interviewed, when questions about the relationship between dowry and education were asked, almost all went out of their way to point out that their families paid no dowry for their marriages when none had been paid, although that question was never explicitly asked. Once beyond answers about whether men now wanted more or less educated women. the most consistent answer about the nature of the relationship was that it depended upon whether or not the woman wanted a man older and more educated than she was, as dowries increase with the education of the man. Yet, almost all of the men and women who were interviewed said that a man should be older and better educated than his wife, including the most educated young women in the sample. The reason given for the age difference was, most often, that "women age faster," which is counter to our expectations, as women outlive men in our society, but a more accurate portrayal of life expectancy in India during the lifetimes of those being interviewed. The life expectancy at birth between 1961 and 1971, for example, was 45.6 years for women and 47.1 years for men. The reason most often given for the difference in education was generally that it "caused trouble in the family" or "made the men feel insecure" if men do not have more education than their wives. As long as husbands need to be older than their wives, then girls will have to marry at a young age, often before they have completed their educations. And, as long as husbands need to be more educated than their wives, and the more education that a man has the higher the dowry that must be paid, then concern about the amount of dowry can and will influence the amount of education that a family is willing to give its daughters.

D: The Girl without a Dowry

In the same generation as the doctor, a girl reached the age at which she should be married while her father was in jail on a charge for which he was subsequently acquitted. While her father was in prison there was no income for the family, so the question of her dowry became a serious issue. According to family lore, four male family members within the same generation as the girl met to decide what to do about her fate. They are said to have drawn straws to determine who would marry her without dowry. All four boys who took part in the strawdrawing were cousins: one boy was the youngest in his family and, therefore, considered to have "no responsibilities;" there were two brothers who had no sisters; the young man who drew the short straw was the oldest son in a family with two younger sisters.

The widowed mother of the boy who drew the short straw did not object to one of the four boys taking on the responsibility of marrying the girl, only that it was her son rather than one of the three other boys. His mother argued that the dowry from his marriage was necessary for the dowries of his two sisters, while the other three boys had no such responsibilities. The boy's grandmother, the mother of his deceased father, was especially upset and it was she who controlled the family resources. In addition, his mother had recently had a very bad experience involving dowry and an attempt to marry off one of his sisters. Immediately after his father's death, his mother had decided to marry off his sister, although she was only sixteen years old. The wedding had been cancelled on the actual day on which it was scheduled to occur. The groom's family, who were "strangers" to the family, had begun to find "problems" with the bride, such as the size of her toes, which, they said, they could overlook for a larger dowry. The bride's mother and halted the marriage with the support of her bothers. Finally, the uncle of the "Girl without a Dowry," who was also the father of two of the boys who had taken part in the straw-drawing, offered to pay the girl's dowry and, thus, end the dilemma within the family. Today the girl and her husband-of-the-short-straw are happily married and have two children.

We in the United States live in a society defined by individual achievement, desire, and failure; when we talk of "family" we mean a nuclear unit that we try to become independent from as early as possible. Indian families not only often include a larger number of related individuals in the household unit, but they also consider themselves to be a fundamental part of a larger family unit that extends vertically into the past and future and horizontally far beyond our kinship calculations. This larger family unit can act as a corporate structure, the nuclear families within it being only subsidiaries. Throughout the interviews conducted the role that non-nuclear family members played in resource control, marriage decisions, and education decisions was paramount. The young male relatives who drew straws and the uncle who stepped in to solve the problem created by a family member without a dowry, while considered honorable and good, were only perceived to be have played a proper role in maintaining the overall well-being of the family.

In the large family unit that was interviewed, the range of individuals who decided whether or not a girl would or would not continue her education was impossible to code without reducing all categories to insignificant numbers. In our culture education is an individual achievement; in India, an education is

part of a family strategy of investment. Education has to be seen as one part of a strategy that involves a corporate unit; some members get less in order to help others get more. Not only does the oldest daughter in a family often receives less education, but also sometimes the oldest son. Their educations, the interviews suggest, are sometimes cut short in order for them to work to produce the money for their younger sisters' dowries and their younger brothers' educations.

Another example of a family strategy that appeared in a number of places among the histories of those being interviewed was the marriage of a brother and sister in one family to a brother and sister in another family. The net gain is no dowry and everyone ends up with a spouse. This practice occurred most often in families with little income; it also occurred in a number of cases where the oldest son had gone to work to pay for younger sisters' downies and younger brothers' educations and ended up too old and uneducated to make an attractive son-in-law. This is a southern Indian family, where the preferred marriage had been traditionally a cross-cousin marriage (mother's brother's son to daughter or father's sister's daughter to son), contrary to the northern Indian tradition where a certain degree of genetic separation is required for a marriage. Within the sample of those interviewed cousins have married cousins and uncles have married nieces. This charateristic of the traditional culture allows the investment made in female education to be returned back into the family, as well as providing a reasonable solution to the increasing problem of high dowry payments. The major lesson that the family felt it had learned from the aborted marriage arrangements of the sister of the boy who drew the short straw was the potential danger in marrying its daughters to "strangers."

These four stories have been used to illustrate some of the major strategies in this family that utilized or affected education. The interrelations among changes in land ownership, fertility, child survival, family structure, employment, and dowry form a backdrop against which the following analysis of educational practices, relationships, and impacts has to be placed.

III. HOW DOES EDUCATION CHANGE THE GIRL AND HER LIFE

A. Marriage

If education changes the age at which marriage, pregnancy, and child rearing occur, then it provides an explanation for the correlations between increased girls' education and decreases in fertility. The argument is that, whatever direct impacts the education which the girl receives have on her that influence her future fertility and parenting, the amount of education received indirectly affects fertility by delaying her age of marriage (Blumberg, 1989; Khan, 1993; Kritz and Gurak, 1989; Salaff, 1976; Senanayake, 1990). However, among the women who were interviewed, generally, the age of marriage determined the amount of education received, not the amount of education determining the age of marriage. And, although both a women's age of marriage and the amount of education that she had received were related to the number of pregnancies that she had, when the amount of education was held constant, then the impact of age of marriage did not predict fertility independently of the amount of education.

During the interviews, the story of a woman's education often was recorded when the question of age of marriage was asked, or the story of her marriage unfolded when asked about her education. Some of the linkages that the women pointed out are evident in the following comments, which were selected from interviews to provide a range of perspectives and contexts illustrating why the relationship between marriage and education is so interwoven for women in India.

50 years old, 8 years of education:

Her maternal grandfather arranged her marriage when she was 11 years old. Her father-in-law did not want her to study any more because he believed that a more educated wife would be less obedient.

42 years old, 9 years of education:

She was not even asked when her marriage was arranged. She watched movies, dreamed of a love life, and looked forward to getting married. She saw her husband once before the wedding, but trusted her parents completely.

54 years old, 8 years of education:

She got married when she was ten years old and was never sent back to school after puberty. Her father felt that if she went to school with boys around her mother-in-law would object.¹

Girls do not necessarily move to their husband's household at the time of marriage.

70 years old, 5 years of education:

Her marriage had been arranged at her birth, but did not take place until she was 13 years old. She believes that women should marry before they are 20 years old as they will adjust better and, if they wait until later, it is hard for them to find husbands.

47 years old, 16 years of education²:

Her parents decided that she should get married when she was in the tenth grade because they had found a boy they liked, with good education and distantly related. In the beginning she didn't like the idea because of his pimples. Her maternal grandmother said "a beauty does not give you food." Later she began to like him.

64 years old, 5 years of education:

Her parents arranged her marriage when she was nine years old. But the Sarade Act³ was in effect at that time and her father was in government service, so he took her out of government jurisdiction areas to get her married. Then she went off to her spouse's house and that was the end of her education. The elders used to say that girls don't need education, boys need it for jobs.

75 years old, 4 years of education:

She wanted all of her girls to study and used to urge her husband to let them. Her husband worried that if daughters became more educated they would want more educated spouses and he would have to give larger dowries. But their last daughter fought with her father and did a B.A.degree.

The age of a girl at her marriage has been and probably still is the major factor determining how much education she will receive. There is, however, evidence in the interviews that, over the time period represented by these generations, the relationship has begun to reverse, the amount of education that parents desire for their daughters more often determining the age at which they marry. This shift can be seen in the difference in women's comments: among the older women (above), their marriage generally occurred when they were very young and the interruption of their education which resulted was seen as either an unfortunate by-product of the need to get them married or an advantage to marrying them off at an early age; among the younger women (below), there was support for education until girls reach their twenties, when they began to receive pressure, especially from their mothers, to stop studying and get married or were simply married with little or no say in the matter.

²She continued her education privately after marriage by studying to pass exams.

³In the 1930s, a law, the Sarada Act, was passed which stipulated that no girl could be married before she was 16 years old. Since that time several additional laws have been passed and it is now illegal for a girl to marry before she is 18 years old or a boy before he is 21 years old.

36 years old, 16 years of education:

Her husband's uncle arranged her marriage. She had no say in it. In fact, she had just started a PhD in the USA, but her parents wanted her married and she had to go home.

23 years old, 14 years of education:

After she completed her degree she tried to find a job, but was not successful. Her parents wanted to arrange her marriage and they said that marriage would provide security, so she said O.K.

31 years old, 16 years of education

Her parents arranged her marriage. She had finished her B.A. and was studying privately at home for her masters, so she was quite agreeable to the arrangements.

Almost all of the marriages of the women who were interviewed had been arranged for them. When women resisted these marriage arrangements, they often had obstacles to overcome.

40 years old, 18 years of education:

Her father died while she was young and her maternal uncle was strongly opposed to her studying after the tenth grade. She was an only child and her mother fought along with her against her uncle for the continuation of her education. But she was not getting married because no one took an interest. Her father had died and her maternal uncle was still upset and refused to be involved. She finally married when she was 39 years and would still like to have children.

29 years old, 14 years of education:

Her mother's family kept pushing her parents to get her married, but she wanted to study. However, her father retired and she had a younger sister. She did not want to be stubborn and cause her parents anxiety, so she said yes. She had grown up in a small town, and after coming to her husband's home in Bombay she realized how young she was compared to people who are married in cities. She studied privately for a degree at home, but missed going out to school. She unsuccessfully counseled her father not to get her younger sister married so young and not to anyone more than seven years older than she was; her sister was married at 17 years old and her husband is nine years older than she is.

36 years old, 16 years of education:

She and her husband decided to get married; they had been classmates for ten years prior to their marriage. Their parents were opposed, She has no problem with having more education than her husband, but some people think that a husband with less education is looked down upon. Her father did not speak to her for three years after the marriage. Now everyone is adjusted.

45 years old, 18 years of education:

She was 30 years old and a doctor when her parents arranged her marriage. She wanted to marry a man with a post-doc, as she wanted a man equally or more qualified than herself. She was afraid that if he was less qualified he would have an inferiority complex. Even with all of her education, her parents still had to give dowry.

Up to a minimum level of education, which has been set by each family and varies among families, girls' schooling until they reach that level postpones the age at which they will be married; once beyond that level, marriage often determines the amount of additional education a girl receives. The mother's argument is generally that her daughter can study after her marriage, but, if she gets too old, she may not be able to marry. The fathers in this family, when they only have a few children to concentrate on and are committed to education, tend to treat their daughters as they do their sons, which means encouraging as much education as the children are interested in pursuing.

31 years old, 14 years of education:

No one ever asked for her opinion about her marriage. Her parents just said that they had found a good boy that they liked and that they were going to get her married. All of her female cousins were married when they were less than 20 years old and her mother said that if she studied any more she would be too old to marry, plus she would then need a more educated spouse that would take a higher dowry.

49 years old, 14 years of education:

Up to the eighth grade both parents insisted on school. After that her mother wanted to get her married. Her father insisted she study until a bridegroom was found and until she had enough education to support herself if she needed to. He fought strongly with her mother over this.

30 years old, 16 years of education:

She wanted to be a doctor, wanted to study science. But her mother said no sciences course because her mother was afraid that if she went into science then she would not get married early because science courses can't be done privately.

31 years old, 14 years of education:

She has encouraged the education of her daughters, but still does not want them to continue on to professional degrees. They need to just get a basic degree and then get married. Even if they become very educated, it will not affect the amount of the dowry for them. They will become old and could become a financial burden.

In all of the generations there have been women who continued their education after they were married; what has changed over time is the point in their education where marriage occurs.

Although there were too few cases of education after marriage among the women who were interviewed for this change to be statistically significant, the following table indicates the direction of the change.

TABLE 1:

Educational Levels of Women Who Continue their Education

After Marriage According to Generation

		NUMBER OF		
EDUCATION LEVEL	Second	Third	Fourth	NUMBER OF CASES
6-10 years	100%	14%	8%	5
11+ years	0%	86%	92%	. 18
TOTAL	100%	100%	100%	
# of cases	3	7	13	23

The relationship between the marriage and the education of a girl changes over time as economic and cultural pressures exert differing impacts. For example, in the earlier generations of the family, the education of girls tends to be perceived as a source for undermining girls' traditional attitudes and reducing their attractiveness as housewives, a relationship found by Desai (1987) and by Seetharamu and Ushadevi (1985) in India and by Shrestha (1986) in Nepal. Within the later generations of the family, one of the major reasons given for the increased education of daughters is that potential husbands, with the right amount of education and earning potential, currently want well-educated wives. This corresponds to the findings of Caldwell, Caldwell, and Reddy (1985) in rural south India, where the growing pressure on land, technological change, and a trend toward hiring individual laborers rather than entire families has led to excess labor in families. Under those conditions, parents had encouraged increased amounts of education for their daughters because a girl with some education was in a better position to find a white-collar husband, who could offer benefits to the family.

Being able to provide a dowry for one's daughter is considered a major parental responsibility in India. Families worry that the wage-earner will die or lose his earning ability before he has

Too few cases in generation one to include; too many unmarried and/or incomplete educations in generation five to include.

fulfilled this responsibility. The comments below indicate the high level of pressure families feel to come up with dowries for their daughters.

36 years old, 10 years of education:

Her father always wanted her to study. They had found a marriage for her older sister so they were rid of one responsibility and could concentrate on educating the two boys and herself, the youngest girl. But her father died when she was in the tenth grade and her mother then arranged her marriage.

50 years old, 7 years of education:

Her parents "needed" to get her married as she was oldest. They had five daughters and wanted to get their responsibility done. She was only eight when she was married and doesn't even remember her wedding.

34 years old, 12 years of education:

Her older cousin arranged her marriage when she was 18 years old. She did not want to get married - she wanted to study - but everyone pressured her. Her father had died and she was the oldest daughter. The family did not want the responsibility of having to arrange her marriage any more. She is now studying through a correspondence course.

62 years old, 5 years of education:

Her husband wanted to educate their younger daughter because he had got the older one married off too early, but he died before she finished the tenth grade. After that there was a lack of money and she had to struggle to educate her sons, so got the younger daughter married off.

31 years old, 16 years of education:

Her older sister did not complete high school and her parents did not want her to do a professional course. They thought that with two girls still unmarried, a professional course would take too long and marriage for her younger sister would be delayed. So she stopped her education without going on for a professional degree.

The felt pressure to make sure that the dowry for daughters' marriages is available and that the funds will be spent to secure their marriages has led to a tendency to marry off the oldest female children as soon as possible, which, in turn, has led to less education for the oldest girls in the family In an expanded sample of 373 cases, which includes all of the parents and siblings of spouses marrying into the family unit being interviewed, as well as those family members who are part of sibling groups where all have completed their education, 80 sibling sets were examined. Among these 80 families, oldest daughters receive consistently less education than their younger sisters.

TABLE 2: Birth Order and Years of Education for Males and Females

	NUMBER OF YEARS OF EDUCATION						
	Females Number of Cases Males Number of Cases						
First Child ⁵	8.75	32	13.74	42			
Second Child	8.95	41	13.59	32			
Third Child	9.73	37	14.13	30			
Fourth Child	10.26	31	13.39	18			

The impact of the perceived need to come up with dowry for their daughters and to find marriages for them as soon as possible can also be seen in the amount of education received by all of the children. For the families included in this expanded sample, the average amount of education for all of the children in each family is negatively correlated⁶ with the percent of female children in the family.

Because of the tendency for women's lives to be centered within the household, not only in India but throughout the world, experience that comes from the wider interaction with the outside community is often limited. From the interviews it was clear that the girls who were married at a very young age⁷ tend never to have experienced being "on their own" in even the most limited interpretation or to ever have had responsibility for making decisions and taking actions that involved the world outside the household during the early years of their marriage.

70 years old, 7 years of education:

She stopped going to school after her marriage at 13 years when she moved to husband's household in Madras. Her husband asked her to join the school there but she felt too self-conscious in front of her in-laws and refused. Now she regrets it.

⁵Position among all children, regardless of sex.

⁶r=-.26, p=<.01

^{&#}x27;Generally these are the women from the older generations among those interviewed.

80 years old, 5 years of education

She went to a government school until she was married at 11 years, but her sister was only tutored at home. Her brother never used to even let her stand in the street.

50 years old, 8 years of education:

She got married when she was 11 and father-in-law said no more education. Her husband and in-laws would never have let her work. Women need education so that their words will be heard at home and outside, so that they can mix with people, and so they don't have to depend on men for everything.

During the interviews men and women were asked questions about their opinions, both at the time of marriage and at the present time, about matters such as how many children they ideally wanted to have, the sex of those children, and how many years between the children. While almost everyone was able to answer these questions for their present opinions, including their reasons for those opinions, most women answered that they had had no opinion at the time of their marriage. As they explained, they were often too young to have thought about such matters and/or the consequences of their decisions. Forty-three of the 83 women who answered the question about the number of children that they ideally wanted to have when they were first married said that they had had no idea at that time.

TABLE 3:
Women's Opinions about Number of Children at Time of Marriage

	Mean Age at Marriage	Mean Number of Pregnancies	Mean Amount of Education
No opinion at marriage	14.61	4.67	7.06
All women	18.22	3.50	9.88
Opinions at marriage	21.48	2.21	13.48

In other words, the older a woman is at marriage, the more likely she is to have ideas about how many children she wants at that time and the fewer children she is likely to have. Not surprisingly, the women who had opinions about the number of children they want to have at the point when they were first married also had more education. This corresponds to the findings of Vlasoff (1980), who found ideals of family size among unmarried adolescent females in rural India were significantly associated with levels of education.

The age of marriage for women is correlated with the degree of control they report having over how resources are spent at the time of marriage⁸ and with whether or not they have ever worked outside the home. There were too few child deaths in the sample of families interviewed to provide a child mortality rate that could be investigated for the impact of women's ages of marriage. However, information was obtained from all of the women interviewed about their current knowledge of some child health issues¹⁰. The combined amount of knowledge that women had about these health issues was related to their age of marriage¹¹. Although the age at which a women was married was related to the amount of knowledge she had about some health issues, it was more highly correlated¹² with her increased use of medical services¹³. The degree to which medical services are utilized is, as would be expected, also related to where a women lives. 14 as fewer services are available in less urban areas. Parents who were interviewed reported that it is the child's mother who actually takes her child for medical care in 75 percent of the cases, which means that women are able to improve their children's opportunities for health directly, without having to influence a family decision-making process. For a women to actually make use of medical services for the health of her child requires that the services are available, that she has knowledge of their benefits, and that she has the confidence to use them, especially against pressure from family elders who may favor home remedies. And one of the things that influences the confidence to make use of medical services is experience in "going out," as the women interviewed called it, an experience that has generally been increased by waiting to a later age to marry.

Although in the older generations of those who were interviewed the timing of a girl's marriage tended to determine the amount of education that she received, in the younger generation the amount of education desired for daughters tended to determine the age of marriage. Once marriage is delayed in order to achieve an educational standard, then education can be seen as a factor leading to the decreases in fertility and increases in child health that occur with later

^{*}r=+.26, p<.05

[°]r=+.47, p<.01

¹⁰ This was coded according to responses to questions about the treatment of diarrhea in children, the impacts on child's health and mother's health due to the spacing of child births, and knowledge about AIDS

 $^{^{11}}r=+.31$, p<.01

¹²r=+.59, p<.01

¹³ This was coded according to responses to questions about the use of prenatal care, the use of a hospital for delivery of children, the use of trained doctors for child delivery and child care, and taking children to doctors for routine examinations.

¹⁴r=+.52, p<.01

marriage. The age at which a girl marries has an impact on the girl herself, which leads to changes in her fertility and the health care of her children. As discussed above, the older the girl is at the time of her marriage, the more likely she is to have an opinion at the time of marriage about the number of children she wants, the fewer children she is likely to have, the more knowledge of certain health issues she is likely to acquire, and the more likely it is that she will make use of medical services. The lack of experience in dealing with the outside world and the dependence upon others to handle those interactions, which are characteristic of very young brides, may change little over time as the women who were married at such young ages grow older and continue to lack the confidence necessary to deal with the "outside" world.

B. Knowledge

One of the most troubling aspects of the current rush to promote girls education through policy changes and new programs is the frequent assumption that it is the knowledge that girls acquire in school that is what determines the impact of that education on fertility and child health. Education is most often measured in terms of the number of years of schooling, as it has been so far in this study (the influence of different types of schooling experiences will be considered in Section IV). Most of us believe that literacy and a better quality of education are good things. but we cannot assume that either the actual acquisition of literacy or the experience of a higher quality of schooling will have an impact on reaching the desired goals of decreased fertility and increased child health other than motivating girls to stay in school for a longer period of time. If the reason governments are going to devote their scarce resources to girls' education is to try to achieve fertility and child mortality reductions, then they need to examine whether or not it is the literacy and/or knowledge acquired in school that will achieve those impacts or if it is other aspects of the educational process. This understanding can help them decide, for example, whether to invest in literacy programs for girls and women outside of the school experience, or to invest in improving the quality of schooling that is offered so that literacy and more knowledge are acquired, or to invest in programs designed to increase girls participation in formal education.

Some incorrect yet unavoidable assumptions have been made about the similarity of educational experiences in order to enable a comparison of the impact of schooling that took place fifty years ago with that which has occurred in the last twenty years. One of those involves the primacy assigned to education in the lives of young people today, while many other kinds of educational experiences competed for the child's time and attention in the older generations among those who were interviewed. Another assumption is that the same amount of education had the same consequences on status and earning capacity then as now. And when acquisition of specific knowledge becomes an issue, the role that the media has played has fluxuated over the generations as the government has used the media too different extents for different messages.

The amount of education that the women interviewed had received correlated significantly with the level of their knowledge of contraceptive techniques¹⁵. However, women's knowledge of birth control techniques was not significantly correlated with the number of pregnancies that they had had. A simple explanation for this lack of relationship is that most of the contraceptive techniques being discussed were not available during the time period when many of the women who were interviewed were having their children. In many cases, their knowledge had been acquired after the point when it would have been useful. There are a number of studies that have demonstrated that, while knowledge of contraception techniques may be a necessary condition for reducing the number of pregnancies, it is not a sufficient condition. Maynard-Tucker (1989) found that in rural Peru, where 90 percent of the wives and 99 percent of the husbands interviewed had knowledge of at least one method of contraception, almost one quarter of them reported using none, and more than half of the rest used only a rhythm method. In this region women averaged a new pregnancy every 18 months.

TABLE 4:
Level of Contraception Knowledge According to Level of Education

LEVEL OF EDUCATION	LEVEL OF (142 (BCD 05		
EDUCATION	1-4 Techniques	5-7 Techniques	8+ Techniques	NUMBER OF CASES
0-5 years	50%	12%	0%	7
6-10 years	0%	45%	8%	21
11+ years	50%	43%	92%	42
TOTAL	100%	100%	100%	·
Number of Cases	4	42	24	70

chi-square = 23.29, p<.01

The amount of knowledge that women had about a number of health care issues affecting their children was also significantly correlated with the amount of education they had received 16. In

¹⁵r=+.49, p<.01

¹⁶r=+.31, p<.05

this case, the amount of knowledge women had about these medical issues was significantly correlated with increased use of medical services ¹⁷. As previously discussed, the use of medical services is more directly under a woman's control than is her fertility because she alone is the one who selects the type of medical care that her children will receive in 75 percent of the cases.

In attempting to understand how a girl's schooling leads to more knowledge about contraception and child health, it is important to think about where women obtain their information about such matters and how the process of obtaining information is influenced by education. During the interviews women were asked about the sources for their knowledge about contraceptive techniques and sex. As the table below demonstrates, their responses varied according to the amount of education they had received.

TABLE 5:
Sources of Information about Contraception and Sex According to Women's Education Level

SOURCE OF	KNOWLEDGE OF SEX				IOWLEDGE NTRACEPT	
INFORMATION	0-5 years	6-10 years	11+ years	0-5 years	6-10 years	11+ years
Media	0%	5%	44%	0%	12%	41%
School	0%	0%	7%	-	•	•
Friends/Relatives	0%	5%	16%	20%	41%	38%
Spouse	100%	90%	33%	60%	35%	3%
Medical Professionals	-	-	-	20%	12%	18%
TOTAL	100%	100%	100%	100%	100%	100%
Number of Cases	7	20	43	5	17	29

¹⁷r=+.34, p<.05

School itself appears to play a small role; literacy, obtained through education and used for access to written media forms, may play a larger role. Yet television and radio are the media forms that were most often mentioned as the source of information; those interviewed, for example, reported that 83 percent of what they knew about AIDS came from these media forms. Both measures of knowledge of contraception and knowledge of medical issues are closely related to the amount of education that a woman has, which suggests that one of the ways that an education has an impact on the girls who obtain it is through changing their knowledge in areas that are related to declines in fertility and improvements in child health. However, the way in which that happens may not be direct, the specific type of relevant information not being actually acquired in school and the literacy learned in school not being necessary for obtaining the information from other sources.

From what those being interviewed reported in the areas of information about sex and about contraception, the amount of education that a woman has appears to create a shift in the sources that are relied upon for obtaining information in these areas. With more education, women are more likely to depend upon the media¹⁸, friends and relatives, and medical professionals for their information; they are less likely to depend upon their husbands for information. As the table above illustrates, the major shift away from husbands as source of information occurs when women have eleven or more years of education, the amount of education all but four of the men who were interviewed had had. One of the issues that these women often brought up when discussing the benefits of education was that it enabled them to "go outside," both literally and in terms of a more active involvement with the outside world. Where women acquire their knowledge can also be seen as an process in which education influences a shift from acquiring information only within the household to, in addition, consulting sources outside of the household.

While a girl's education appears to be related to changes in the amount of information she has about contraception techniques and some health care issues, her knowledge about birth control techniques is not correlated with the number of pregnancies that she has. In addition, it appears that what she learns in school is generally not directly related to her contraceptive and sexual knowledge, but, rather, to a shift in where she obtains her information about these issues. Therefore, the assumption that women's literacy, or the actual learning that takes place in school, is what gives women access to greater knowledge about contraceptive and health care, and that it is this greater knowledge that explains the relationship between increases in girls' education and decreases in fertility and child mortality, cannot be supported by this set of interviews.

¹⁸However, the role that media plays in general has increased over the generations and the better educated women tend to be in the younger generations.

C. Status

Education could be seen as the most concentrated way we currently have for exposing children to a great range of experiences in a rather condensed form. The women who were interviewed said that the reason that they needed an education was so they could go out - to the bank, to the post office, to the market - and not be dependent upon men for everything. This suggests that they saw education as altering both their ability to experience the world outside the household and the nature of the relationships within the household. McGrath (1976) has pointed out that in societies in which women's contacts remain otherwise circumscribed, schooling is even more important for women than for men, as men are routinely expected to interact with other adults in the course of employment, recreation, and political participation. While women in India have always experienced social interactions with other women around religious and domestic activities, the contexts of those activities are less influenced by a larger world framework than are the contexts within which men generally interact. Where informal learning situations for women are limited, education can be a key to the development of her self-confidence. Klineberg (1973), in Tunisia, and Callaway (1986), in Nigeria, both found that one of the primary impacts of education for girls in those societies was increased contact outside of their households and the opportunity to find social reinforcement for self-conceptions and aspirations. Women's education may affect fertility and child health by increasing self-confidence, which is translated into a greater role in fertility and health decisions.

One assumption that has often been made in the literature on decision-making is that if women are in control of decisions within the household, then choices will be made that lead to fewer children, better child care, and increased education of children. The information collected during these interviews does not initially appear to support this assumption. Returning to the story in Section II of the "Educated Woman," her father, the engineering professor who educated all of his children, was deeply disappointed in the impact of his daughters' educations had on the number of children that they had, as two of the sisters of the educated women had, respectively, six and four children. These two women's husbands, who had little more education than they did, refused to have vasectomies, the most reliable type of birth control available at the time. The four sons of the professor, like the five well-educated sons of the eldest of the "Two Brothers," all had vasectomies; the average number of children for those nine males was two children each. These men consistently gave the same reason for their small families: they believed that an equivalent amount of education to their own was necessary in order to make an acceptable living in India and they could not afford to educate more than two children to that level. In addition, a tremendous social pressure was created during the 1950s, 1960s, and 1970s to control the number of births for nation-building reasons.

The implication of these stories is that these men made the fertility decisions which radically reduced the number of children they had in comparison to both previous generations and to other families. During the earlier generations of those who were interviewed, men often reported having vasectomies without even telling their wives that they were going to do so. Yet, in other

families of the same generation in which the men were less well educated, the women appear to have been the source of pressure for fewer children, but unable to control whether or not birth control occurred. All forms of birth control in use during that time period were under the control of men: vasectomies, condoms, and withdrawal.

80 years old, 5 years of education:

Husband said that after two or three kids he would be celibate. So stopped for awhile, but then had intercourse and third son. He did not stay celibate but she just did not conceive again.

62 years old, 6 years of education:

She wanted to have an abortion when she became pregnant with fourth child because her husband was still unemployed and they were all dependant on her in-laws. She didn't know how to go about getting one and had no one to advise and help her.

64 years old, 5 years of education:

After her fourth child had lived past the first year, her husband had a vasectomy without informing her. He decided on his own. Did not know about tubal ligation in those days.

40 years old, 11 years of education:

When second daughter was three months old she went to the doctor asking for pills. But doctor said pills would be bad because she was breastfeeding and they would decrease her milk. He suggested a loop, but the family said that it harms the health so she did not get it. After the third child, all three having been C-sections, her doctor did family planning on her.

75 years old, 4 years of education:

After their third child, she asked her husband to have a vasectomy after their third child as her brothers had all had. But he said no. They never used any contraception; she just had menopause after the eighth pregnancy.

35 years old, 10 years of education:

Only wanted to have two children, but the first two were girls and her husband wanted a boy. Was confident that third child would be a boy because husband was well versed in astrology and believed in it. Three months after their son was born, her husband had a vasectamy.

These comments come from women with relatively low levels of education, most of whom would have liked to have fewer children than they did, but all of whom had almost no control over the number of pregnancies that they did have. Overall, among those interviewed, the

mother's amount of education is more highly correlated¹⁹ with the number of pregnancies than is the father's amount of education²⁰. Although both the husband's and the wife's amount of education is related to the number of pregnancies that each couple had, when the amount of the wife's education is held constant, then the impact of the husband's education does not predict the number of pregnancies independently of the wife's education.

However, this may not be as meaningful as it sounds. While the women who were interviewed represented a wide range of educational experiences, from no education at all to PhDs, all but four of the men who were interviewed had at least ten years of education. There is so little variation among the amounts of men's educations that it is very difficult to find significant correlations. This problem can be overcome to some extent by use of the expanded sample of 80 sibling sets and their parents that was created by including educational information about siblings and parents of spouses marrying into the family unit. Within this larger group of individuals associated by marriage with the five-generation family unit, the overall level of education, for both men and women, is not as high. Consequently it provided a larger sample of men with more variation in educational levels among them.

TABLE 6:
Number of Children and Amount of Children's Education
According to Father's Level of Education

	. FATH	FATHER'S EDUCATION LEVEL			
	0-5 years	6-10 years	11+ years	CASES	
Mean # of children	6.15	6.49	4.81		
Mean # years of education per child	7.57	10.72	13.13		
Number of Cases	40	93	182	315	

The number of children that a man has does not appear to be significantly affected by his education until he has more than ten years of schooling. The average amount of education that a man's children receive is one educational level beyond that which he received, i.e. primary level (0-5 years) educated fathers educate their children to a secondary level (6-10 years), etc.

¹⁹ r=-.55, p<.01

 $^{^{20}}$ r=-.27, p<.05

Education in India begins to be more expensive beyond the tenth grade.²¹ What the table above shows is that the number of children a father has begins to decrease at the same point that their education begins to become expensive, which corresponds to the reason that almost all men gave for actually limiting the number of children they had or describing ideally how many children they should have had, e.g. the number that they could afford to educate.

Another way to look at the relationships among mother's education, father's education, and the number of children involves changes in impact over the five generations of the family unit that were interviewed, as, generally, men began receiving higher levels of education several generations before women did. Because men reached higher levels of education than women did in the earlier generations, the differences between spouses' educations have significantly decreased over the generations²². The amount of difference in a father's and mother's education correlates significantly with the number of pregnancies that the wife has had²³, the greater the difference in education levels, the higher the number of pregnancies. The amount of difference in a mother's and father's education also correlates significantly with the amount of use of medical services by the family²⁴; the greater the difference between the parents' educations, then the less use of medical services. However, because of the consistently high level of education among all men in this sample, many of these relationships could be determined simply by the impact of the women's educations alone.

If it is the difference in education level between husband and wife that has an impact on family fertility and child health, then one avenue through which this occurs may be created by the increase in women's self-confidence and status relative to their husband's. Those who were interviewed were asked, late in the interview when, hopefully, they had become accustomed to expressing their opinions, if education affects one's status in the family. The simple yes-no answers were significantly different for men and women: 77 percent of the men said yes; only 56 percent of the women thought that education and status were related. The discussions that

²¹This is not for the same reasons as in the United States, where education is free through secondary school and then becomes expensive; some post secondary education is also free in India. However, the schools that students are admitted to after secondary school are less likely to be in their own town, especially for those families who do not live in large cities. This requires some form of boarding for the students, which becomes the major expense in continuing their educations. This play a large role in the continuation of girls' educations beyond completion of the tenth grade as far fewer girls than boys have been boarded during their schooling, a factor that will be discussed in Section IV. In addition, due to the limited number of post-secondary student positions available and a quota system that predetermines who may have a particular number of position according to caste background, the remaining student positions generally require payment, as illustrated in the story of "The Doctor."

 $^{^{22}}$ r=-.28, p<.01

 $^{^{23}}$ r=+.33, p<.01

 $^{^{24}}$ r=-.41, p<.01

followed this question explained some of this dichotomy and portrayed the power of the "insidevs-outside" orientations of men's and women's lives. The "family" that the men assumed we meant was the extended, multi-generational unit that we were in the process of interviewing. The "family" that the women assumed we meant was the household unit in which they lived.

We grappled with the word "status" during the process of conducting the interviews, because we realized that we were not really getting at what we wanted to know. The best translation in Telugu for what we wanted to ask was "making your words heard," but that still tended to evoke answers from women that education did not affect it and answers from men that education did affect it. More interesting, often, were the reasons women gave for why they did or did not see education as having an effect on their status.

47 years old, 8 years of education:

Family members used to say that she had at least an eighth grade education and they were more respectful of her than her sister, who failed in seventh grade.

64 years old, 5 years of education:

Education gives security and self confidence. But education does not mean one's words will be heard as even highly educated women are dominated. Education gives confidence to go outside and talk to people, but some confidence is inborn and not related to education. Women need confidence to convince husbands to use family planning and other things.

25 years old, 14 years of education:

She is able to influence decisions more than she would be able to if she had less education as education increases self-confidence. Right now she has equal power with her husband and doesn't want to have more so that she can dominate.

62 years old, 5 years of education:

Education is useful only if widowed and need a job. Even now people listen to her if she wants and it has nothing to do with education. Being a mother is an honor and is enough to make people in the family listen to her. Maybe in the outside world, if she needed to be listened to, she would need education.

33 years old, 14 years of education:

She has used her education to work tutoring kids privately after her second child was born. Within the family her education has had no effect as her husband is cooperative and she would have had the same influence with less education. But education definitely affects status outside the home.

57 years old, 3 years of education:

Her husband is not well-educated (6 years of education), so her lack of education does not effect her status in the family. With education there is more knowledge, but at home she has enough respect. But she could do more, or maybe get a small job, or teach her own kids if she had more education.

76 years old, 10 years of education:

In her father's family her status is very high because she is more educated than her siblings. Her siblings think that she knows more about the world. In her in-laws family everyone is educated so it has no effect on her status. If she were less educated, she would be seen as lower by in-laws. "If husband calls me a donkey, the whole world will." Her older sister-in-law always had an inferiority complex as she was less educated.

However, once women's own level of education was added to the analysis of whether or not women believed that education had an impact on their status in the family, then women's responses began to more closely resemble men's.

TABLE 7: Education Level and Whether Education Affects Status

		1	AND OPEN OF			
		0-5	6-10	11+	NUMBER OF CASES	
М	Affects	0	75%	76%		
L	Not Affects	0	25%	24%		
E	TOTAL	•	100%	100%		
	# of Cases	0	4	50	54	
F	Affects	25%	38%	65%		
E M	Not Affects	75%	62%	35%		
A L	TOTAL	100%	100%	, 100%		
E	# of Cases	8	21	43	72	

The more educated the woman is, the more likely she is to say that education has an impact on her status within the family.

As with many aspects of human relationships, there are no simple criteria that can be used to determine who does and who does not have status, let along what increases that status. From a Western, feminist perspective, these women often appeared to have little status. The examination of decision-making in the next section shows a strong relationship between the amount of education that women have and the role that they play in making household decisions. Yet, from many of these women's perspectives, there is no perception of any lack of status or reduced decision-making power within the household, where they feel that education plays little role.

D: Decision-Making Power

Another way to gain understanding about the role that women's education plays in influencing the number of children that a couple have, the health of those children, and the education of those children is through an examination of decision-making processes within households. Evidence suggest that women in most countries of the world lack sufficient decision-making power to act according to their own priorities. For example, Curlin and Brown (1985) have pointed out how difficult fertility control is for women even when sources of contraception are available. The World Fertility Survey shows that nearly half of the married women surveyed in 27 poorer countries want no more children. Yet only one third of them were using any form of contraception. The Zimbabwe Women's Bureau (1981) found that although women report the biggest problem facing them is the number of children they have, they are often opposed to family planning because their husbands would not allow it. Gulate (1985) has found that generally South Asian wives are more anxious to control their fertility than are their husbands. A number of other studies suggest that when women have more decision-making control over their lives, then they decrease their own fertility and improve the health of their children (Blumberg, 1985; Caldwell, 1979; D'Souza and Bhhyiya 1982; Greenstreet, 1990; Kennedy and Cogil, 1987; Kumar, 1985).

One way that education may change a girl in a manner that leads to deceases in fertility and increases in child health and education is by augmenting her self-confidence and decision-making power. Both LeVine (1980) and Caldwell (1986) have suggested that education increases a mother's self assertion and confidence, which she used to defend and pursue her children's health. In a study of 300 mothers' in Mexico, LeVine et al (1987) found that mother's schooling was consistently related to those behaviors most important for child health and that women with some schooling reported making more of the important marital decisions jointly with their husbands than did women with little or no education.

Throughout the interviews there were a number of questions designed to determine who in the household made decisions. Because of the extended family structure in many of the households, often those answers indicated relatives other than the husband and wife. For example, when asked who had made educational decisions for the person being interviewed, 13 percent answered that it was a male family member other than his/her father; 7 percent answered a female family member other than his/her mother. Among the women who were interviewed, a

total of 22 percent of those who were interviewed said that family members other than themselves or their spouses decided whether or not they would get prenatal care. On the other hand, only four percent of those interviewed said that a relative or friend had decided on the first birth control method used. Although it is clear that family members beyond the husband and wife were frequently involved in family decision-making, often those persons were not interviewed, so many different kinship relationships were mentioned that no categories large enough to compare could be constructed, and the tendency across the generations was for family members beyond the nuclear couple to play a progressively smaller role. Therefore, for the purposes of this paper, those answers have been ignored, especially as the majority of the answers given focused on the husband-wife relationship.

Five different measures were used, each concentrating upon a different aspect or moment in the process of household decision-making. The following tables demonstrate the relationship between the wife's level of education and who both the husband and wife report as making decisions about each of these aspects of their life together. The perceptions of both husbands and wives have been added together for each couple because sometimes there are differences in how much control husbands and wives see themselves as having. The decision-making process within the household has been quantified by coding who the husband and wife each reported as making each of five different decisions. Each coding used a scale in which a 1 equaled the husband making the decision, a 2 signified a joint decision, and a 3 indicated that the wife made the decision. Thus, for each of the five areas of decision-making, a minimum of 2 (both husband and wife report that husband makes that decision) and a maximum of 6 (both husband and wife report that wife makes that decision) is possible.

TABLE 8:
Control of Household Resources at the Time of Marriage
According to Wife's Education Level

DECISION BY	WIFE'S LEVEL OF EDUCATION			NUMBER OF
	0-5 years	6-10 years	11+ years	CASES
Husband	63%	65%	24%	. 24
Joint	25%	24%	65%	28
Wife	12%	11%	11%	7
TOTAL	100%	100%	100%	
Number of Cases	. 8	17	34	59

chi- square = 2.99, p>.1

When women were asked who controlled resources in their households, many of them responded that they did, while their husbands also sometimes insisted that they, the husbands, did. Again an inside/outside dichotomy in the perceptions of men and women led to different conclusions. In many cases men felt that all of the resources of the family were under their control, but that they allocated money and decision-making power to their wives for household expenses, such as food and clothing. Women felt that they controlled all of the money because in most of these households, the domestic expenses tended to account from almost all of the resources available to the family.

TABLE 9:

<u>Control of Household Resources at the Present According to Wife's Education Level</u>

DECISION BY	WIF	NUMBER OF		
	0-5 years	6-10 years	11+ years	CASES
Husband	67%	53%	15%	19
Joint	33%	30%	67%	34
Wife	0%	17%	18%	10
TOTAL	100%	100%	100%	
Number of Cases	6	17	40	63

chi-square = 13.41, p<.01

What the two tables above demonstrate is that husbands dominated decisions about the spending of resources, both at the time of marriage and at the present, but that the husband's dominance became somewhat less in later stages of the marriage. The tables also illustrate that the more education the wife has, the more influence she has over resource allocation, both when she is first married and in the present. What is perhaps most striking about both of these tables is the abrupt drop in the husband's decision-making power that occurs when his wife has more than ten years of education. This is particularity important because almost all of the men interviewed had over ten years of education, making this the point where women can be seen as arriving on the same educational plateau as their husbands.

As this study was conducted as a joint effort between education and population specialists, a great deal more information was collected about contraceptive techniques than is reported in this paper, which focuses on the role of education. Although information is available for the entire history of contraceptive choices that each couple made, the first technique selected by each

couple has been used to calculate decision-making roles as it is likely to be the point where the impact of education can best be recognized.

TABLE 10:

Control of Decision About First Contraceptive Method According to Wife's Education Level

DECISION BY	WIF	NUMBER OF		
	0-5 years	6-10 years	11+ years	CASES
Husband	100%	82%	55%	48
Joint	0%	18%	30%	16
Wife	0%	0%	15%	6
TOTAL	100%	100%	100%	
Number of Cases	6	17	40	70

chi-square = 10.22, p<.05

Table 10 indicates that husbands dominated selection of the first method of birth control used by the couples, but that women played a larger role in that decision when they had more education. Given the cultural perspective that men should make all such decisions in India, it would be a rare instance for a women to say that she, along, made the decisions about contraception. A woman's influence is more likely to be represented as "joint," except in the instance of deciding with her doctor about contraceptive methods. The 15 percent of well-educated women claiming control of decision are generally translating some of that control to professionals outside of the family.

TABLE 11:

Control of Decision About the Number of Children According to Wife's Education Level

DECISION BY	WIFE	NUMBER OF			
	0-5 years 6-10 years 11-		11+ years	CASES	
Husband	88%	71%	15%	27	
Joint	12%	29%	73%	32	
Wife	0%	0%	12%	4	
TOTAL	100%	100%	100%		
Number of Cases	8	21	34	63	

chi-square = 25.23, p<.01

Table 11 shows that men also dominated decisions about the number of children that the couple had, with the role their wives played in the decision increasing according to the amount of education that they had. Again the significant point where the dominance of husbands in the decision-making process became reduced and women begin to play an important role is when women have more than ten years of education and are, therefore, on the same educational level as their husbands.

One manner through which husbands dominated choices of contraception and number of children is evident in what women reported as their sources for information about sex and contraceptive techniques: 100 percent of the women with five or fewer years of education and 90 percent of those with ten or fewer years obtain their knowledge of sex from their husbands; 60 percent of those with five or fewer years of education and 35 percent of those with ten or fewer received their knowledge of contraceptive techniques from heir husbands. In several instances, wives who were interviewed reported that no birth control techniques were ever used, while their husbands reported using either a rhythm method or withdrawal. One of the most surprising aspects of the interviews was the frequency with which both men and women responded to questions about what their spouses thought about issues such as the number of children they wanted to have by saying that they had "no idea." There were, in fact, very few of either the men or the women who were interviewed in any but the youngest generation who did know what their spouse's preferences were. Clearly the type of discussion which frequently is seen as the essence of fertility decision-making sometimes does not occur between spouses in India.

During the interviews that were conducted, data about two different relationships between parents' and children's educations were collected: (1) the education of the interviewee and that of his/her children; and (2) the education of the interviewee and the educations of his/her mother and father. When the relationships among the interviewee's education and his or her mother's and father's educations are examined, the mother's education is significantly statistically correlated with the interviewee's education²⁵ as well as is the father's education²⁶. Because many of the children of those being interviewed had not yet completed their educations, these relationships between amounts of educations could not be calculated.

When asked about decisions regarding their children's educations, the responses of both men and women indicated that mothers, no matter how much eduction they had received, seldom played a major role in determining the amount and type of education their children received. However, when the children are separated by sex, the role that mothers play in their daughter's educations becomes more apparent.

TABLE 12:
Who Makes Education Decision for Male and Female Children

DECISION	GIRLS	BOYS	NUMBER OF CASES
Father	49%	81%	77
Joint	32%	17%	. 32
Mother	18%	2%	14
Number of Cases	71	52	123

When asked who had made decisions about their education at each stage, men and women indicated a pattern of decision-making (Table 13) that was very similar to that they had described when discussing their children's educations (Table 12). The data in the following table do not represent who between the two parents made educational decisions in general, but who made them at the point that education stopped for the child. As the previous comments of women about the relationship between education and marriage illustrated, there is often a debate between parents over their daughter's education. Mothers and fathers tended to push for more education or to insist on education ceasing at different points in their daughter's educational

²⁵ r=+.49, p<.01

²⁶ r≈+.44, p<.01

careers. In this family, mothers play little role at any point in decisions about their son's educations.

TABLE 13:
Who Makes Education Decision for Children at Highest Level of Education That They Attain

	CHILDREN'S LEVEL OF EDUCATION						
DECISION BY	0-5 years	6-10 years Female Male		11+ years			
	Female			Female	Male		
Father	75%	59%	75%	38%	80%		
Joint	0%	27%	25%	42%	18%		
Mother	25%	14%	0%	20%	2%		
TOTAL	100%	100%	100%	100%	100%		
Number of Cases	8	23	4	40	48		

As the table above illustrates, very few of the sons included in this family unit received less than ten years of education. When they did, their fathers dominated decisions at the point that their education was discontinued, as did their fathers when they continued on to more advanced degrees. The mothers role in decisions about their daughters educations is greater than their role in their sons' educations at all levels of education that the daughters had completed, but is still less important than the father's role. Caldwell, Reddy, and Caldwell found in rural south India that high class parents stress educating girls to achieve literacy and that when the education of daughters is not perceived as being associated with improved earnings and/or family status, then the mother's education is less likely to provide a positive force in increasing her daughter's schooling. In the case of daughters who have continued their education beyond secondary school, the mother's role in deciding whether or not her daughter's schooling would continue is larger relative to the father's role than in any other category. However, according to the reasons women in that category gave for stopping their educations, the impact of their mother's role at this point in her daughter's educational career is predominately negative, the mother being more interested in securing a marriage for her daughter than having her continue her education.

The measure of decision-making power that emerges from combining these five scales relates to other variables, such as levels of education or number of pregnancies, in a pattern that indicates its significance.

TABLE 14:

Measures of Women's Decision-Making Power

Significantly Correlated with Her:	Not Significantly Correlated with Her:
Age of marriage (r=+.57)	Generation
Urban Residence (r=+.31)	Socioeconomic level
Difference from husband's education (r=+.37)	Husband's education
Years of education (r=+.56)	Years children's education
Number of pregnancies (r=40)	Knowledge of contraceptive techniques
Use of medical facilities (r=+.35)	Knowledge of medical issues

The fact that the measure of female decision-making power is not correlated with either generation or socioeconomic level is important as it suggests that the measure is not influenced by major sources of variation other then levels of education among families. The lack of correlation with the woman's husband's education supports the same conclusion, plus it promotes the proposition that it is something about the woman herself that is being measured. The fact that the decision-making measure does correlate with a more urban residence corresponds to other evidence that women in rural environments tend to have less say in household decisions. In light of the earlier discussion about the relationship between age of marriage and changes in fertility and child health, it is interesting that a woman's decision-making power correlates with her age of marriage.

That the decision-making measure is correlated with the difference in the wife's education and her husband's, as well as with her own education, suggests that it is not a simple reflection of greater amounts of education, but the amount of education that is important in her household, a point that a number of the women being interviewed brought up. This is particularly important in attempting to generalize these results to groups with a lower over-all level of education. In spite of what women had to say when asked directly about whether or not education had an impact on their status or "making their words heard" within the household, it is clear that, in fact, their education does play a significant role in how much input they have into decisions about resource allocation, contraception, and number of children. In all of the calculations of decision-making, it is at the point that women achieve more than ten years of education that they begin to exercise a more important role in their household's decision-making. This should not be interpreted as women needing more than ten years of education to play significant roles in decision-making, but that these women needed that much education because that was the amount of education that their husbands had.

The lack of correspondence between a woman's decision-making power and her knowledge of either contraceptive techniques or health care issues, although both of these factors are correlated with the amount of education that she has, suggests that there are several different avenues through which education may be influencing changes. However, while the relationships between knowledge about contraception and health issues and fertility decreases and increased use of medical services are strongly influenced by generation, due to the relationship between when the information is relevant to the person and when it is available, the correlations between a woman's decision-making power and both the number of pregnancies that she has and the amount that she uses medical services are statistically significant across all generations. What the relationships around this measure of decision-making power suggest is that one of the important ways in which girls' education influences changes in fertility and child health is through the "voice" that education, both in and of itself and in its relationship to the amount of education that women's husband's have, gives to women in what happens in the household.

IV. VARIATIONS IN SCHOOLING

Examining what changes in the girl who is educated is one way to explore the "black box" that exists between girls' education to changes in fertility, child health, and child education. On a policy development and program design level, information about those changes has to be translated into what kinds of changes in the education system will promote them. Consequently, the last section of this study is devoted to an attempt to understand what aspects of the education that has been received (up to now described only in terms of number of years) have influenced the degree to which the girl is transformed in ways that lead to decreases in fertility, improvements in child health, and increases in children's education.

This research allowed us to look at a number of schooling characteristics that could influence the degree to which the girl is changed:

- 1) the medium of instruction used for her education at each stage of schooling:
- 2) the type of schooling that she experienced: walking or riding to a local school, being tutored at home privately, or living with a relative or in boarding facilities while attending school; and
- 3) the quality of education that she received.

A. Medium of Instruction

In countries that are multilingual, as most areas of the world are, the medium of instruction used for an individuals' education can confer additional skills. Yate's (1982) study of Belgian colonial schools in Zaire traced a history in which boys were consistently educated in schools and classes that used French as the language of instruction while girls were generally taught in local languages. Limited literacy training for girls in the local language, rather than nationally and internationally used French, effectively restricted the girls' employment opportunities in the modern sector.

The three languages in which the members of this family received their schooling were Telugu, Hindi, and English. Before the research began, these languages were perceived of as representing three concentric worlds: the local, the national, and the international. However, as the interviews proceeded it became apparent that, while English and Telugu did represent international and local levels of interactions for members of this family, it was usually English that was seen as a national language. Due to the cultural appositions within India, Hindi was most often conceived of as a language of northern

¹ Of four categories that had been created - excellent, good, average, and poor - only the first three were found among the backgrounds of the family members who were interviewed. The coding of the school background was done by a senior member of the family who knew the communities well. The criteria that he used were: "excellent" if teachers had reputations as being dedicated and good, good facilities, good discipline, higher than average scholastic results for the region, and encouragement offered to students to perform well; "good" if the reputations of the teachers were mixed, some discipline, scholastic results above average in the region, and good facilities; and "average" if the teachers placed more emphasis on tutoring students outside of the school than their performance in the classroom, minimum facilities, poor discipline and scholastic results average for the region.

India rather than a national language. However, as very few of those who were interviewed had received an part of their education in Hindi², this difference had little impact on the data analysis.

The comments below demonstrate some of the ways that subtle differences in educational goals were expressed through the medium of instruction parents selected for their children, differences in how girls and boys were educated, and the role language skills can play in women's lives.

62 years old, 6 years of education:

When she got married at 11 years, her father stopped her education because he refused to spend any more money on her education. She had no idea of education's importance at the time, but later, when she saw all the other educated women, she was extremely envious. She wanted to know English to be able to talk to everyone, especially outside her state.

76 years old, 10 years of education:

She had only 4 years of education when she got married when she was nine years old; the school only went up through four grades in her village. Her sisters-in-law spoke a different language and when her in-laws suggested that she learn it she jumped at the chance. Her husband was selected for a job with the railway and her in-laws felt she should learn English; they asked if she would like to study English and she said yes.

42 years old, 11 years of education:

Her family moved about during the time she was growing up, which made language a problem. She was tutored at home in Telugu through the fifth grade because they lived in areas with different languages. She lived with her grandparents and went to a Telugu medium school for the fifth and sixth grades, then returned to live with her parents in the seventh grade, attending a school taught in Hindi. Her two younger brothers were sent to an English medium schools throughout so language was never a problem for them

41 years old, 14 years of education:

She had not gone to English medium schools until she reached college. Her brother attended expensive, English medium schools throughout - it still rankles with her. Her father decided to leave her in their home town and send her to the local school there. He felt that girls needed Telugu culture.

Although some women had felt that language of instruction distinctions had been made in boys' and girls' educations on a primary and secondary school level, the table below demonstrates that, generally, boys' and girls' experiences were similar through the tenth year. At that point, however, differences in parents' expectations about how their children's educations will be used begin to have an impact on the language of instruction selected. Eighty-six percent of the men interviewed had received their higher education in English, the language that provides the greatest application outside of the household,

20	Table	15
	12016	13

within which all members of the family spoke Telugu; only 66 percent of the women received their higher education in English.

TABLE 15:

Medium of Instruction According to Sex of Student

Education Level	Medium of Instruction	Girls	Number of Cases	Boys	Number of Cases
0-5 years	Telugu	66%	00	65%	
	Hindi	3%	88	4%	74
	English	31%	·	31%	
6-10 years	Telugu	50%		56%	
	Hindi	8%	72	4%	73
	English	42%	·	40%	
11+ years	Telugu	26%		10%	
	Hindi	8%	50	3%	60
	English	66%		86%	

The language of instruction, selected according to expectations about the role the child being educated will play, can have a self-fulfilling aspect to it. If a woman does not have adequate skills in English, then there are many "outside" experiences in which it would be difficult for her to participate. If the degree that these experiences outside the household and the confidence that having the skills to participate in them affect women's power to make decisions within the household and their ability to act according to those decisions, then language of instruction can influence a woman's decision-making power, the number of pregnancies that she has, and her use of medical facilities.

The medium of instruction was recorded for each level of schooling and coded according to a scale reflecting the degree of external use implied by the language: Telugu =1, Hindi =2, and English =3. All women who had five or fewer years of schooling had Telugu as their medium of instruction, so no variation could be measured among those cases. For the women who had had between six and ten years of education there is a significate positive correlation between the language of instruction and the use of medical services³. As discussed in the last section, it is women themselves who generally secure the medical services necessary for their children; English skills can provide the additional confidence necessary for "going out" to take advantage of medical facilities. For the women with ten or fewer years of education the medium of instruction they were educated in had no significant impact on the number of pregnancies that they had; as illustrated in the last section, the number of children that a

³ r=+.56, p<.01

couple have is a decision generally dominated by husbands unless their wives have over ten years of education.

For those women who had completed eleven or more years of education, almost all had only two or fewer children and almost all reported very high use of medical services, which provided too little variation among them to find significant relationships with variations in their medium of instruction. The language of their instruction after secondary school was, however, significantly correlated with their decision-making power⁴. Women who had been educated in English were more able to "make their words heard" when interacting with their husbands, 86 percent of whom had received their advanced educations in English.

B. Type of School

Both men and women who were interviewed described three types of schooling experience: a local school, private or public; studying to pass equilivancy exams privately at home; and staying either with a relative or in boarding facilities in order to attend a school in a different place. Important differences exist between boys and girls in which of these alternatives they experience at different stages in their educations.

TABLE 16:
Type of School Attended According to Sex of Student

SCHO	SCHOOLING		Number of Cases	BOYS	Number of Cases
0-5 Years	Private	9%		9%	
	Local	91%	87	91%	74
	Boarded	0%		0%	
6-10	Private	6%		3%	
Years	Local	93%	72	96%	74
	Boarded	1%		1%	
11+	Private	16%	·	3%	
Years	Local	78%	50	58%	67
	Boarded	6%		39%	

⁴ r=+.42, p<.05

During their primary school years, the majority of those interviewed studied at local schools. None of the members of this family lived elsewhere in order to go to school and an almost equal number of girls and boys studied privately at home to pass exams equivalent to a primary school education. During their secondary school years, relatively few of those interviewed had experienced either tutoring or boarding options for their schooling. Among those who continued their educations beyond the tenth grade, however, there is again a radical difference between the experiences of boys and girls. The women who continued their education after the tenth grade often study privately at home after marriage or, most often, attend local colleges, while a high percentage of the male students leave home to study at a school in another town or state. Thus the educational experiences of men and women often develop in different directions after secondary school: one direction that limits the schooling experience to the knowledge acquired through education without the social experience of schooling or to living at home and attending a local school; and one direction that maximizes the social experience by moving the student out of his or her home environment.

The unwillingness of parents to board their daughters has a number of other consequences, one of which is that the educational career of a girl frequently ends when there is no local school for her to attend.

57 years old, 10 years of education:

Her father was transferred and her mother did not want her to stay in Madras to continue studying. Her mother was very conservative and never let her go out; she did not want to have a girl stay with relatives in order to study.

40 years old, 11 years of education:

She did not go to school after the tenth grade; her father taught her at home and she took the exams. Her father said that girls did not need to be sent away to college, but her two brothers both went away to college.

23 years old, 14 years of education:

There was no college in her town. She wanted to do a M.A. and stay in a hostel in another town, but was not allowed to. There is no opportunity to mix with people unless you go out to study.

56 years old, 8 years of education:

Her father was afraid to send girls to school even thought he was very educated and they lived in a city.

40 years old, 15 years of education:

She was studying for a M.A. privately at home, but had no incentive to finish. It did not have the right atmosphere and was not like a regular classroom.

39 years old, 12 years of education:

There was no college in her town and her father did not want to send her out of town.

A review by UNESCO-ROEAP (1984) contends that the supply of schools is not a constraint on girls' education in India because 90 percent of the children have access to a primary school within a kilometer of their homes. However, once beyond the five grades of primary school, distances to schools become greater, eliminating the option of continuing their education for many girls or forcing them to attend whatever school happens to be near their home, whatever its quality might be. Boys, on the other hand, are able to continue their educations and to select higher quality schools due to the flexibility allowed them in terms of boarding options.

The consequences of this pattern of private, local, and boarded education extends beyond the actual schooling experience. Girls are kept at home for their educations and/or are not allowed to board for their education both because it is less expensive and in order to protect them from the influences of the "outside" world. Having less experience with the "outside" world than their male counterparts, they are less knowledgeable and confident in dealings with matters outside the household and are more dependent upon the opinions and decisions of their husbands within the houshold.

The type of school attended was coded according to progressively greater experience of the "outside" world: tutored = 1, local = 2, boarded = 3. For women with five or fewer years of schooling, the relationships between type of schooling and the number of pregnancies they have had or their use of medical services could not be examined as all of the women with this little education had attended local schools. Among women with six to ten years of schooling, the type of school that they had experienced was significantly negatively correlated with the number of pregnancies that they had and significantly positively correlated with the amount of medical services that they used for their children's health. The difference in confidence between privately and formally educated girls may be extreme enough to not only have an impact on the use of medical services, which is generally under a woman's direct control, but also affect the decision-making role she plays with her husband to determine the number of children that the couple will have. The impact of type of school attended could not be explored for the women who had more than eleven years of education due to the lack of variation among them, almost all of whom had two or fewer children and a very high use of medical services.

C. Quality of School

It is difficult for judgements about the quality of schooling received in a particular school to avoid the personal biases of the person making the judgements as objective criteria are difficult to establish and quantify; they are, nevertheless, at least worth attempting. The previously described coding⁷ of school quality resulted in three levels of quality: average =1, good =2, and excellent =3. As in the examinations of medium of instruction and type of school, little difference appears to have occurred in the quality of education received by girls and boys through the tenth year of their schooling. However,

⁵ r=-.47, p<.01

⁶ r=+.60, p<.01

⁷ Found on page 37.

for the education received after secondary school, the quality of school attended by boys was higher than for those attended by girls.

TABLE 17:
Ouality of School Attended According to Sex of Student

SCHOOLING		GIRLS	Number of Cases	BOYS	Number of Cases	
0-5 Years	Average	19%		15%	60	
	Good	49%	81	56%	68	
	Excellent	32%		29%		
6-10	Average	11%		13%		
Years	Good	54%	66	54%	68	
	Excellent	35%		32%		
11+	Average	22%		11%		
Years	Good	39%	46	44%	62	
	Excellent	39%		45%		

For women who only attended five or fewer years of schooling, the quality of that education made no significant impact on the number of pregnancies that they had or their use of medical facilities. Women with eleven or more years of education had too little variation in the number of pregnancies, almost all two or less, and use of medical services, all very high use, for any significant relationship with the quality of schooling. For the women who had between six and ten years of education, the quality of their education was significantly correlated with their use of medical services but not with the number of pregnancies that they had had. As discussed before, because women are directly able to enact their decisions about use of medical facilities, differences in the quality of secondary education can make a difference in the knowledge and confidence necessary to make use of medical services, but not be sufficient to affect the decision-making process with their better educated husbands which is necessary to reduce the number of pregnancies that they have.

[&]quot;r=+.44, p<.05

V: COMBINING EDUCATION WITH WORK OUTSIDE THE HOUSEHOLD

A number of studies have concluded that employment and the income resulting from it increase both the status and decision-making power of women in their households and lead to decreased fertility and improved child health (Alo and Adjiebeng-Asem, 1988; Blumberg, 1985; Chaudhury, 1978; Roldan, 1982). As it was in using their education to work outside the home that the women in this family obtained the greatest degree of "outside" experience, it is consistent with the analyses of age of marriage, amount of education, and type of education that employment amplifies the impact of women's education on their fertility and their children's health.

When some of the women who were interviewed answered questions about the impact of their education on their lives or about the relationship between education and status, they began to talk about jobs they did or did not have and did or did not wish they had. This relationship between education and work outside the home is only to be expected in a society that consistently sees the primary reason for obtaining an education as the need to earn a living. Earning a living was given as the major benefit of an education for male children by 94 percent of those interviewed and for female children by 43 percent. The comments below indicate how much women see their status as affected not only by their education, but also by whether or not they are employed.

49 years old, 14 years of education:

Even with the education that she had, she did not work. Therefore, she feels that her education was wasted. So what is the point of studying more? Education has given her self-confidence, but otherwise she is not sure that her status has been affected. Even uneducated people can influence if they are the dominating type.

40 years old, 18 years of education:

She believes that if she was less educated she would have been happier. There are too many challenges of work and at home and too much responsibility. Just education alone does not give influence; financial independence is what gives status.

59 years old, 14 years of education:

She would like for her daughters to work; she wants them to be involved outside the house, to be exposed to the world. But this must be in addition to taking care of their households.

49 years old, 14 years of education:

If she had had less education maybe she would not be able to judge things and make decisions as well. More education would have helped only if she had worked and 'moved' with people. 'Moving' in society or a job are the only things that will increase ability to make decisions. Education in itself will not help.

This is, however, changing as the number of educated and unemployed Indians increased

The relationship between a women's education and the likelihood that she will work outside the household is extremely close, the amount of education a woman has had and ever having had a job being highly positively correlated 10. In addition to the high correlation between education and working outside the household, the table below points out that it is generally only those women who have more than ten years of education who work, rather than a more continuous relationship involving gradually more women working as their level of education increases. The socioeconomic level for most of the families who were interviewed was high enough that it was not generally necessary for these women to work in order to provide income for their families. The women said that they wanted jobs for the additional, non-essential, income that the job would provide and for the personal fulfillment that they expected from working.

TABLE 18:
Women Who Have and Have Not Worked Outside Their Household According to Education Level

WORKED OR		NUMBER OF		
NOT	0-5 years 6-10 yea		11+ years	CASES
Have not worked	100%	96%	34%	45
Have worked	0%	4%	66%	30
TOTAL	100%	100%	100%	
Number of Cases	8	23	44	75

chi-square = 29.82, p<.01

The relationship between education and employment and the actual experience of attempting to work outside the home was frequently difficult for the women who were interviewed. The well-educated women who had not worked often gave the same reasons that women from the United States frequently give.

49 year old, 14 years of education:

She tried to teach but stopped because of the children and household responsibilities. It was not worth working and paying most of her earnings to a servant while neglecting her kids. Her education was wasted, so what is the point of studying more?

49 years old, 14 years of education:

She thought of working, but worried as there was no one to take care of the children after school. Her husband said that it would be too hard on her and that financially there was no need for her to work. A working woman's life is hard.

¹⁰ r=+70, p<.01

TABLE 19:
Number of Children of Women Who Have and Have Not Worked Outside Their Households

NUMBER OF * CHILDREN	HAVE NOT WORKED	HAVE WORKED	NUMBER OF CASES
2 or fewer	32%	67%	32
3 or more	68%	33%	39
TOTAL	100%	100%	100%
Number of Cases	44	27	71

chi-square = 8.21, p<.01

If education does increase the likelihood that women will work outside the home, then the social changes that occur when women are employed are apart of the social impact of schooling for girls. Among those women who were interviewed, the effect of having a job on the amount and type of education that they had received often was to augment the impact of the education. Whether or not a woman had ever worked outside the home was significantly positively correlated with her use of medical services¹¹ and negatively correlated with the number of pregnancies that she had had¹². It was also significantly correlated with the amount of decision-making power she has in the household¹³. How dramatic the impact of employment can be is illustrated by the table above, which shows the relationship between women who have and women who have not worked outside their home and the number of children that they have.

¹¹ r=+.53, p<.01

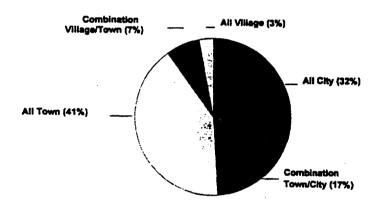
¹² r=-.32, p<.01

¹³ r=+.53, p<.01

V. DESCRIPTIVE DATA

The 178 individuals about whom data was collected fall into five generations, the total number being relatively evenly divided according to the sex of the individuals. Not all of these 178 cases were interviewed; data about four deceased individuals who make up generation one and the starting point for the family history, plus another 16 key deceased family members, were supplied by their children and siblings. Although a relatively small percentage of the family members spent their school years in a rural environment, the residence patterns of the family were not overwhelmingly urban and the entire range of environments was represented. While the distinction between rural and urban may have been clear during the childhoods of those in the older generations, it has since become blurred by the density of population in India and role that the media has played in reducing the contrast between what rural and urban contexts are thought to represent.

CHART 1
Residence of Family Members During
Primary and Secondary School Years



By the standards of most of the poorer nations of the world and even by Indian standards, this is a well-educated family. While this creates difficulties in estimating how far its findings can be generalized to less well-educated families, it has the advantage of containing the full range of educational levels, from none to PhDs, and being able to monitor the changes across the generations, again from none to PhDs. The mean number of years of education for the entire sample is 11.88 years; for women it is 9.88 years and for men it is 14.56 years. For the expanded sample of 373 cases, which includes the siblings of spouses marrying into the family as well as the family members in sets of siblings where all have completed their educations, the means number of years education for women was 9.25 and 13.85 for men.

The increases in girls' education over the five generations of the family are similar to the increases found among the women in the expanded sample including siblings of spouses marrying into the family, although the overall educational level of the women within the interviewed family is somewhat higher.

CHART 2

Number of Years of Education of Female
by Generation in Two Samples (Mean)

14

12

50

10

8

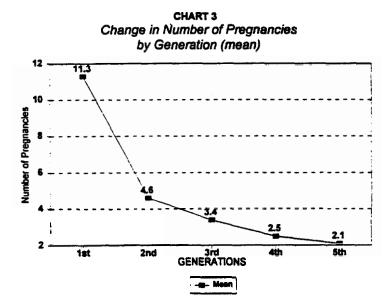
4

2

1st 2nd 3rd GENERATIONS

4th 5th

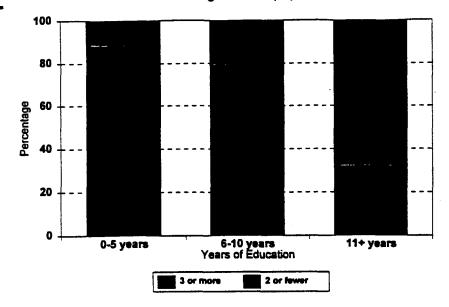
- # of Cases = 240



Women in the five generations interviewed had from zero to 20 pregnancies. The amount of education a women had achieved and the number of pregnancies that she had were highly negatively correlated.

¹ r=-.55, p<.01

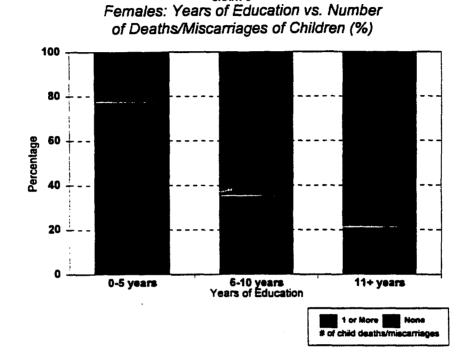
CHART 4
Females: Years of Education vs. Number
of Pregnancies (%)



While the relationship of a women's education to her fertility has been the most focused upon aspect of this research, the relationship between education and child health has also been examined. However, because this was less of a priority, no data was collected about a child's actual state of health and women who were interviewed were only asked questions to determine their knowledge of and their practice of relatively few child health related behaviors. The relatively small size of the sample and the relatively high socioeconomic level of the overall family combined to produce very few cases of child death under the age of five years, therefore, making an examination of changes in child mortality also difficult. Among the family members who were interviewed, the following number of deaths of children under five years of age occurred in each generation:

GENERATION	NUMBER OF CHILD DEATHS
1	9
2	8
3	8
4	2
5	0

A stronger measure was produced by separating those women who have never experienced either a child death or a miscarriage from those who had. The two groups of women did not differ significantly in terms of socioeconomic levels or residence, but do in terms of educational level and generation.



The third major area where women's education has frequently been found to have had an impact is that of their children's educations. Among those interviewed, the amount of education that an individual had received was correlated with the amount that his/her mother had received² and only slightly less correlated with his/her father's education³. This difference is more pronounced when only a daughter's education is considered; her amount of education is highly correlated⁴ with her father's amount of education and even more highly correlated⁵ with her mother's education.

 $^{^{2}}T=+.49$, p<.01

 $^{^{3}}$ r=+.44, p<.01

¹ r=+.63, p<01

⁵ r=+.73, p<.01

TABLE 20:

	-Fathers' Years of Education			M	others' Year	rs of Educat	tion	
Daughters	0-5	6-10	11+	N	0-5	6-10	11+	N
0-5	82%	13%	2%	12	18%	6%	0%	12
6-10	18%	34%	28%	21	29%	23%	0%	22
11+	0%	53%	70%	43	53%	71%	100%	55
TOTAL	100%	100%	100%		100%	100%	100%	
Number of Cases	11	15	50	76	62	17 [°]	10	89

Parent and child educational relationships follow the same pattern in the expanded sample of 373 cases.

CORRELATION MATRIX

	Generation*	Socioeconomic*	Residence*	Women's Age of Marriage	Women's Ed. (# of years)	Husband's Ed (# of years)	Diff. in Husband's and Wife's Education	Women Employed	Knowledge Contra. Tech*	Knowledge Med. Issues*	Decision-Making Power*	Medium of Instruction	Type Schooling	Quality Schooling
Generation*		28	NS	+.36	+.35	26	28	+.89	NS	NS	NS	NS	+.18	NS
Socioeconomic*	28		+.27	26	NS	NS	+.20	NS	NS	NS	NS	NS	NS	NS
Residence*	NS	+.27		+.24	+.50	+.32	25	+.29	NS	NS	+.31	+.40	+.34	+.17
Knowledge Contra.*	NS	NS	NS	NS	+.49	NS	NS	NS			NS	NS	NS	NS
Knowledge Med.*	NS	NS	NS	+.31	+.31	NS	42	NS			NS	NS	NS	+.33
Decision-Making Power*	NS	NS	+.31	+.57	+.56	NS	37	+.53	NS	NS		+.42♥	NS	NS
Number of Pregnancies	50	NS	26	45	55	27	+.33	32	NS		40	NS	43 †	NS
Use of Med. Services*	NS	NS	+.52	+.59	+.74	+.41	41	+.53		+.34	+.35	+.56 1	+.44 †	+.44 1
# of Years Children Educated	29	+.46	NS	NS	+.24	+.62	NS	NS			NS	NS	NS	NS

^{-- =} not relevant/possible NS = p > .05

^{* =} See coding criteria

CODING CRITERIA

Generation:

First through fifth, calculated from two original couples in the first generation.

Socioeconomic Level:

Four levels established, but there were no family members in lowest so only three categories were used:
1) inherited land or other fixed assets, annual income received from assets sufficient to not have to work or income of at least 200,000 rupees with only two children to support; 2) some fixed assets, own house, income sufficient to maintain three or four children, including sending to the schools of their choice, but children will need to work; 3) no fixed assets, difficult to raise more than one or two children, cannot afford to board children for schooling.

Residence:

Periods of living in village, town or city are divided into three time periods: 1) years up to ten years old; 2) from ten to 25 years old; and 3) and over 25 years old. Coded as: village=1, town = 2, and city =3.

Knowledge of Contraception Techniques:

Coded for total number of techniques for preventing pregnancies that can be named and described.

Knowledge of Health Care Issues:

Answers to questions about treatment of diarrhea in children, the impact of child spacing on children's and mother's health, and knowledge about AIDS. Coded to have more and better knowledge correspond to high total score.

Decision-Making Power:

Total of who husband and wife each report as 1) controlling resources at time of marriage, 2) currently controlling resources, 3) making decisions about first method of contraception, 4) making decisions about number of children, and 5) making decisions about children's educations. Coded as: husband making decision =1, joint decision=-2, and wife making decision =3.

Use of Medical Services:

Coded from 0 to 5 according to number of types of services report using: 1) use of prenatal care, 2) use of trained doctor for child delivery, 3) use of a hospital for delivery of children, 4) use of a trained doctor for child care, and 5) taking child to doctor for routine examinations.

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